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Web Exclusive: A TOD Primer

By Dr. Mir F. Ali

Why and how Transit Oriented Development can improve the evolution of mixed-use and compact community development.

The recognition of the unprecedented demand around the world for the development of residential and commercial properties, together with an apprehension of the shortage of land for development, has influenced a wide-spread realization of the need to embrace mixed-use and compact development techniques for new developments. While these techniques are not exactly original, they represent a realistic approach for building more on less land in order to accommodate the current development needs without jeopardizing the needs of the future generations.

According to [a report](#) published by the University of Minnesota, mixed-use and compact development techniques used to be the norm before the development of modern zoning and land-use practices. Such mixed-use residential and commercial developments thrived into the twentieth century, often at intersections and transit stops. These patterns started declining during industrialization in favour of large-scale separation of manufacturing and residences in single-function buildings. As many factories produced substantial [pollution](#) of various kinds, distance was required to minimize adverse impacts from noise, dirt, noxious fumes and dangerous substances. Consequently, houses were segregated from commerce, work, and school. From the 1910s through the 1950s, these techniques were rare in new developments.

The use of mixed-use development patterns and techniques waned then re-emerged as a tool for urban revitalization from the 1960s to 1980s, finally gaining support and traction within the past two decades as a key component of Transit Oriented Development (TOD).

In its simplest form, TOD represents communities designed with the focus to maximize access to public transport and minimize dependence on cars. In addition to empowering the real estate developers and urban planners to address the scarcity of the land, it also enables them to deal with the transportation related carbon dioxide (CO₂) emissions (responsible for one quarter of the global CO₂ emissions), by offering public transportation as a solution to rapidly growing and tedious traffic congestions.

It was discussed in the article, [Using Public Transit to Create More Accessible and Livable Neighbourhoods](#), published by the Victoria Transit Policy Institute, that TOD generally requires at least six residential units per acre in residential areas and 25 employees per acre in commercial centres, and about twice that for premium quality transit, such as rail service. These densities create adequate transit ridership to justify frequent service, and help create active street life and commercial activities, such as grocery stores and coffee shops, within convenient walking distance of homes and worksites.

Transit Oriented Development location is a valuable and scarce resource, similar to waterfront property. It tends to increase property values five to 15 per cent, reflecting the direct benefits to residents and businesses of having diverse transportation options, and resulting automobile and parking cost savings

Residential density requirements for various types of transit services include the thresholds guidelines that reflect "average" conditions and are highly variable depending on various factors, such as: Service Quality; Transit Service Pricing; Demographics; Commuter Financial Incentives; Employment Density; Walkability; and Marketing.

The major attributes of TOD include:

- Limited parking space for personal vehicles;
- Abundant amenities for pedestrians and cyclists;
- A regional facility providing a mixture of uses in close proximity including office, residential, retail, and civic uses; and
- Quick access to public transportation systems;

and as a result figures prominently in Smart Growth, New Urbanism, and Location Efficient Development. The following brief descriptions of these three disciplines will illustrate that the concept of TOD includes the common features among all four disciplines:

- **1. Smart Growth:** Smart Growth Online, a service of the Smart Growth Networks, reported on their webpage that Smart Growth invests time, attention, and resources in restoring community and vitality to centre cities and older suburbs. New smart growth is more town-centred, transit and pedestrian oriented, and has a greater mix of housing, commercial and retail uses. It also preserves open space and many other environmental amenities. The principles of smart growth include: Create Range of Housing Opportunities and choices; Create Walkable Neighbourhoods; Encourage Community and Stakeholder Collaboration; Foster Distinctive Attractive Communities; and Make Development Decisions Predictable, Fair, and Cost-Effective; Mixed Land Use; Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas;
- **2. New Urbanism:** The definition for [New Urbanism](#) provided by Wikipedia states that the goal is to reform many aspects of real estate development and urban planning, from urban retrofits to suburban infill. New urban neighbourhoods are designed to contain a diverse range of housing and jobs, and to be walkable. New Urbanism is the re-invention of the old urbanism, commonly seen before the advent of the automobile age, but also a further elaboration of less common, pedestrian-oriented, urban design experiments that date to the early 20th century. New urbanists support regional planning for open space, context-appropriate architecture and planning, and the balanced development of jobs and housing. They believe their strategies can reduce traffic congestion, increase the supply of affordable housing, and rein in urban sprawl. The *Charter of the New Urbanism* also covers issues such as historic preservation, safe streets, green building, and the redevelopment of brownfield land; and
- **3. Location Efficient Development:** According to the article, [Using Public Transit to Create More Accessible and Livable Neighbourhoods](#), published by the Victoria Transit Policy Institute, Location Efficient Development consists of residential and commercial development located and designed to maximize accessibility and overall affordability. This usually means proximity to good transit service and public services, has good walking and cycling conditions and other features that reduce automobile dependency. It often involves urban infill, such as projects to redevelop inner-city neighbourhoods or converting older industrial buildings to loft apartments. Location Efficient Development can also include efforts to cluster activities and services together into commercial

centres, and to redevelop older downtowns. Residents and employees in such areas tend to drive less, rely more on alternative forms of transportation, and enjoy better transportation options than those who live or work in less accessible areas.

The following benefits of TOD were summarized on the webpage for Transit Oriented Design - [Design for a Livable Sustainable Future](#):

- Higher quality of life;
- Better places to live, work, and play;
- Greater mobility with ease of moving around;
- Increased transit ridership;
- Reduced traffic congestion and driving;
- Reduced car accidents and injuries;
- Reduced household spending on transportation, resulting in more affordable housing;
- Healthier lifestyle with more walking, and less stress;
- Higher, more stable property values;
- Increased foot traffic and customers for area businesses;
- Greatly reduced dependence on foreign oil;
- Greatly reduced pollution and environmental destruction;
- Reduced incentive to sprawl, increased incentive for compact development;
- Less expensive than building roads and sprawl;
- Enhanced ability to maintain economic competitiveness;
- Reduced energy consumption; and
- Reduced GHG emissions.

A recent study identified the realities associated with the implementation of TOD. A successful TOD requires the long-term collaboration of many partners, including transit agencies, local jurisdictions, funding groups, property holders, developers, tenants, surrounding towns and cities as well as state and federal agencies. Municipalities reap the rewards of creating a lively, public place that generates more property tax revenues, and businesses improve access to clients and the local and regional workforce. Neighbourhood retailers increase their customer base with new transit users, TOD residents, and other pedestrians, and regional partners benefit from an attractive new development and transportation centre that can strengthen the regions' appeal and increase property values.

Smart real estate developers and progressive municipalities around the world are teaming up to capitalize on the benefits associated with the concept of TOD in order to decrease the overall demands on auto dependent mobility while improving air quality and the quality of life.

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